

CLAIMS

1. A drilling jig adapted to be used with a drill press to guide a drill for drilling aligned holes in a workpiece, typically a piece of wood, wherein the jig includes:
an attachment means adapted to be releasably attached to a drill press table;
a workpiece holder pivotally connected to the attachment means and the workpiece holder is adapted to releasably hold a workpiece in position whereby the workpiece pivots relative to the attachment means to allow for angled drilling of the held workpiece.
2. A drilling jig as claimed in claim 1 wherein the attachment means includes a first horizontal planar member having at least one longitudinal extending slot for accommodating a first clamp to releasably attach the first horizontal planar member at different positions on the drill press table.
3. A drilling jig as claimed in claim 2 wherein the attachment means includes a second horizontal planar member having at least one longitudinal extending slot for accommodating a second clamp to releasably attach the second horizontal planar member at different positions on the drill press table, and adjacent to the first horizontal planar member.
4. A drilling jig as claimed in claim 2 or claim 3 wherein the clamps are adapted to extend through corresponding apertures in the drill press table.
5. A drilling jig as claimed in any one of claims 2 to 4 wherein each clamp includes a knob connected at one end of a threaded shaft and a clamping jaw at the other end of the shaft.

6. A drilling jig as claimed in claim 2 wherein the workpiece holder is pivotally connected to a side edge of the first horizontal planar members and depends downwardly from that first horizontal planar member.

5 7. A drilling jig as claimed in claim 2 wherein the workpiece holder is pivotally connected to the first horizontal planar member by an adjustable pivot pin that allows the workpiece holder to pivot freely relative to the horizontal planar member when the pivot pin is untightened and that allows the workpiece holder to be held in the position at a desired angle relative to
10 the horizontal planar member when the pivot pin is tightened.

8. A drilling jig as claimed in claim 3 wherein the first horizontal planar member is adapted to slide relative to the second horizontal planar member when a respective clamp is released and that the second
15 horizontal planar member has indicia on a top edge surface of the second horizontal planar member and the first horizontal planar member has a pointer means on a atop edge surface of the first horizontal planar members surface so that the position of the first horizontal planar member relative to the second horizontal planar member can be recorded.

20 9. A drilling jig as claimed in claim 8 wherein the indicia is a linear measurement, typically that of a ruler and the pointer means on the first horizontal planar member is a triangle shaped pointer having one end of the triangle points toward the linear measurement on the second
25 horizontal planar member such that first horizontal planar member and the workpiece can be set at a desired linear position on the drill press table.

10. A drilling jig as claimed in claim 7 wherein the adjustable pivot pin is tightened by a fastening means, typically a spanner.

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11. A drilling jig as claimed in claim 10 wherein the first horizontal planar member has an aperture preferably a longitudinal extending slot, adapted to allow the adjustable pivot pin to be tightened by the fastening means.
- 5 12. A drilling jig as claimed in claim 1 wherein the workpiece holder includes a workpiece clamp to hold the workpiece in position and also includes an adjustable stopper means adapted to allow a bottom portion of the workpiece to rest on the stopper means.
- 10 13. A drilling jig as claimed in claim 12 wherein the workpiece clamp, in the clamping position, holds the workpiece against a surface of the horizontal planar member.
- 15 14. A drilling jig as claimed in claim 12 wherein the workpiece holder includes a longitudinal planar member having the workpiece clamp in a fixed position thereon and fixing means connectable to the stopper means to allow the position of the stopper means to be adjusted.
- 20 15. A drilling jig as claimed in claim 12 wherein the workpiece holder includes holes spaced apart along the longitudinal length of the workpiece such that fixing means can be inserted in a respective hole to hold the stopper means at a desired position on the length of the workpiece holder.
- 25 16. A drilling jig as claimed in claim 12 wherein the workpiece holder has a longitudinal slot in which the fixing means can be inserted to hold the stopper means at the desired position on the length of the workpiece holder.
- 30 17. A drilling jig as claimed in claim 14 wherein the stopper means includes a stop positioned on one side of the workpiece holder and the fixing means includes a knob positioned on the other side of the workpiece holder and

includes a shaft threadably connected at one end of the knob wherein the shaft is adapted to pass through the holes or slot in the workpiece so that the stop can be releasably be held in position by adjusting the knob.

- 5 18. A drilling jig claimed in claim 14 wherein the fixing means is an elongate portion, typically made of metal, and the elongate portion is adapted to slide in a channel in the workpiece holder to allow the stop move up and down the length of the workpiece holder.
- 10 19. A drilling jig as claimed in claim 18 wherein the workpiece holder includes holes spaced apart along the longitudinal length of the workpiece such that a stop holder means can be inserted into a hole to press the elongate member forcibly against the inside walls of the mouth of the channel to prevent the elongate member and the stopper means from sliding.
- 15 20. A drilling jig as claimed in claim 1 wherein the attachment means includes an angular adjustment means whereby the angle of the workpiece holder relative to the attachment means can be adjusted.
- 20 21. A drilling jig as claimed in claim 20 wherein the angular adjustment means is a protractor having an arcuate slot, through which a protractor clamping means can pass so that the workpiece holder can be set at a desired angle.
- 25 22. A drilling jig as claimed in claim 21 wherein the protractor clamping means includes a threaded bolt and wing nut or knurled knob arrangement whereby the threaded bolt is adapted to be fixed to the workpiece holder and is adapted to pass through and move within the arcuate slot and the wingnut or knurled knob can be fastened to the threaded bolt to allow the
- 30 workpiece holder to be set at the desired angle when the protractor clamping means is tightened.

23. A drilling jig as claimed in claim 21 wherein the protractor clamping means includes a threaded bolt and wingnut or knurled knob is integral with the threaded bolt and whereby the threaded bolt can pass through the arcuate slot and into a corresponding threaded hole in the workpiece so as to allow the workpiece to be set at a desired angle when the protractor clamping means is tightened.
24. A drilling jig as claimed in claim 2 wherein the workpiece holder, with respect to the horizontal plane of the first horizontal member can be rotated to 360° , typically the workpiece holder rotates between 0° and 180° so that holes can be drilled in a workpiece that are either parallel or transverse with the longitudinal axis and any angle therebetween.
25. A drilling jig as claimed in claim 1 wherein a workpiece held in the drilling jig is able to be worked on vertically, horizontally or any angle therebetween.
26. A method of using a drilling jig as hereinabove described including the steps of:
- placing the first horizontal planar member to a drill press table;
- aligning the longitudinal extending slot with a corresponding opening in the drill press table;
- inserting a shaft of a clamping member into the slot and opening and attaching a clamping portion to one end of the shaft and a knob to the other end;
- aligning the first horizontal planar member to a desired position on the drill table by sliding the first horizontal member with respect to the table and

then tightening knob of the clamping member to firmly hold the first horizontal planar member to the drill press table;

5 selecting the desired angle to which holes are to be drilled into a workpiece by rotating the workpiece holder about the pivot pin until the desired angle is obtained;

10 tightening the pivot pin with fastening means to hold the workpiece at desired angle;

selecting and positioning a workpiece on the workpiece holder so that the end to be drilled is flush with the top surface of workpiece holder;

15 clamping the workpiece to the workpiece holder, and sliding and retaining the stopper means such that the stopper means abuts the end of the workpiece opposite to the end being drilled.

27. The method of claim 26 wherein the method includes the further steps of:

20 attaching a second horizontal planar member to the drill press table in a similar fashion to the first horizontal planar member such that the two horizontal planar members are positioned, each other in a side by side adjacent relationship and are able to slide relative to another;

25 positioning the first horizontal planar member in a desired position using the pointer on the horizontal planar member and the ruler markings on the second horizontal planar member;

30 tightening the respective clamping members of each horizontal planar member.

28. A drilling jig substantially as herein described with reference to any one of the accompanying drawings.
 29. A method of using a drilling jig substantially as herein described with reference to any one of the accompanying drawings.
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